1

00:00:00,666 --> 00:00:01,456

>> Good afternoon.

2

00:00:01,856 --> 00:00:05,436

I'm Commander Ibad Khan and

I'm representing the Clinician

3

00:00:05,436 --> 00:00:07,556

Outreach and Communication

Activity, COCA,

4

00:00:07,796 --> 00:00:10,186

with the emergency risk

communication branch

5

00:00:10,186 --> 00:00:12,136

at the Centers for Disease

Control and Prevention.

6

00:00:12,276 --> 00:00:14,746

I'd like to welcome you

to today's COCA call,

7

00:00:15,346 --> 00:00:18,876
COVID-19 updates,
Optimizing Strategies

8
00:00:18,876 --> 00:00:20,996
for Healthcare Personal
Protective Equipment.

9
00:00:21,486 --> 00:00:24,606
The video recording of this
COCA call will be posted

10
00:00:24,606 --> 00:00:25,586
on COCA's webpage

11
00:00:25,586 --> 00:00:32,186
at emergency.cdc.gov/coca ca
few hours after the call ends.

12
00:00:32,186 --> 00:00:38,386
Again, that web address
is emergency.cdc.gov/coca.

13
00:00:39,916 --> 00:00:42,546

Continuing education is not
provided for this COCA call.

14
00:00:42,596 --> 00:00:46,106
After the presentation,
there will be a Q&A session.

15
00:00:46,636 --> 00:00:49,436
You may submit questions at any
time during the presentation

16
00:00:49,436 --> 00:00:52,136
through the Zoom webinar system
by clicking the Q&A button

17
00:00:52,136 --> 00:00:54,726
at the bottom of your screen
and then typing your question,

18
00:00:55,266 --> 00:00:57,526
If you are unable to ask the
presenters your question,

19
00:00:57,526 --> 00:00:59,976

please visit CDC's

COVID-19 website

20

00:00:59,976 --> 00:01:07,196

at www.cdc.gov/covid-19

for more information.

21

00:01:07,716 --> 00:01:12,206

You may also email your

questions to COCA at cdc.gov.

22

00:01:12,206 --> 00:01:13,706

For those who have

media questions,

23

00:01:13,706 --> 00:01:19,636

please contact CDC Media

Relations at 404-639-2286,

24

00:01:19,636 --> 00:01:23,866

or send an email

to media@cdc.gov.

25

00:01:24,056 --> 00:01:28,226

CDC's COVID-19 clinical call
centers available 24 hours a day

26
00:01:28,226 --> 00:01:33,476
at 770-488-7100.

27
00:01:33,796 --> 00:01:38,796
Again, that number
is 770-488-7100.

28
00:01:39,336 --> 00:01:41,416
If you are a patient,
please refer your questions

29
00:01:41,416 --> 00:01:42,506
to your healthcare provider.

30
00:01:43,016 --> 00:01:48,706
Also, please continue to
visit emergency.cdc.gov/coca

31
00:01:49,266 --> 00:01:50,936
over the next several
days as we intend

32

00:01:50,936 --> 00:01:53,316

to host COCA calls

regularly to keep you informed

33

00:01:53,316 --> 00:01:55,756

of the latest guidance

and updates on COVID-19.

34

00:01:57,006 --> 00:01:59,756

In add -- in addition to our

webpage, COCA call announcements

35

00:01:59,756 --> 00:02:02,766

for upcoming COCA calls will

also be sent to you via email.

36

00:02:03,106 --> 00:02:05,866

So, please subscribe

to coca@cdc.gov

37

00:02:05,866 --> 00:02:07,596

to receive these notifications.

38

00:02:08,136 --> 00:02:11,056

Please share the invitations

with your clinical colleagues.

39

00:02:11,356 --> 00:02:14,616

For instance, we intend

to hold a COCA call

40

00:02:14,786 --> 00:02:16,936

on COVID-19 this coming Friday.

41

00:02:17,266 --> 00:02:21,076

Additional information will

be shared via email call

42

00:02:21,076 --> 00:02:22,716

announcements after

today's webinar

43

00:02:22,716 --> 00:02:25,436

and should be posted shortly

on the COCA call webpage

44

00:02:25,436 --> 00:02:29,226
at emergency.cdc.gov/coca.

45
00:02:30,836 --> 00:02:33,126
I would now I like to
welcome our presenters

46
00:02:33,126 --> 00:02:34,146
for today's COCA call.

47
00:02:34,476 --> 00:02:36,016
It is my honor and privilege

48
00:02:36,016 --> 00:02:39,136
to welcome our first guest
speaker, Dr. Nancy Messonnier.

49
00:02:39,136 --> 00:02:41,946
Dr. Messonnier is the
director of the National Center

50
00:02:41,946 --> 00:02:45,236
for Immunization Respiratory
Diseases and senior official

51

00:02:45,236 --> 00:02:47,286

for CDC's COVID-19 response.

52

00:02:47,366 --> 00:02:50,016

Our second presenter is

Lieutenant Commander Grace

53

00:02:50,016 --> 00:02:51,506

Appiah who's a medical officer

54

00:02:51,506 --> 00:02:53,826

with the COVID-19

response clinical team.

55

00:02:54,056 --> 00:02:56,286

Our third presenter

is Dr. Michael Bell.

56

00:02:56,286 --> 00:02:58,606

Dr. Bell is the deputy

director of CDC's Division

57

00:02:58,606 --> 00:02:59,976
of Healthcare Quality Promotion.

58
00:02:59,976 --> 00:03:02,876
And our fourth presenter
is Dr. Kuhar.

59
00:03:03,046 --> 00:03:06,336
Dr. Kuhar is the lead for the
COVID-19 Response Hospital

60
00:03:06,336 --> 00:03:07,466
Infection Prevention Team.

61
00:03:07,466 --> 00:03:10,116
And our last presenter
is Captain Lisa Delaney.

62
00:03:10,116 --> 00:03:13,816
Captain Delaney is representing
the COVID-19 response Worker

63
00:03:13,816 --> 00:03:14,926
Health and Safety Team.

64

00:03:15,156 --> 00:03:17,136

Please note that the only side

65

00:03:17,136 --> 00:03:20,426

that will be displayed during

today's webinar is a slide you

66

00:03:20,426 --> 00:03:21,046

will be viewing.

67

00:03:22,336 --> 00:03:24,176

The slides will not

advance again

68

00:03:24,176 --> 00:03:26,176

until we begin the Q&A

portion of the call.

69

00:03:26,296 --> 00:03:29,386

And now our first presenter,

Dr. Messonnier, you may proceed.

70

00:03:29,386 --> 00:03:30,676
>> Thank you.

71
00:03:30,676 --> 00:03:32,096
It's a pleasure to
speak with you today.

72
00:03:33,046 --> 00:03:37,066
As of this morning, there
were more than 375,000 cases

73
00:03:37,066 --> 00:03:38,726
of COVID-19 worldwide.

74
00:03:38,726 --> 00:03:42,056
In the U.S., there has been a
dramatic increase in the number

75
00:03:42,056 --> 00:03:46,496
of cases over the past week and
we expect that we'll continue

76
00:03:46,496 --> 00:03:49,396
as testing at commercial and

public health lab expands,

77

00:03:49,936 --> 00:03:51,626

and as the outbreak continues

78

00:03:51,626 --> 00:03:54,186

to escalate here in

the United States.

79

00:03:54,186 --> 00:03:57,176

As of last night, all

50 states, plus DC,

80

00:03:57,176 --> 00:03:59,846

and New York City reported

more than 50,000 cases

81

00:03:59,846 --> 00:04:03,216

and sadly, more than 700 deaths.

82

00:04:03,216 --> 00:04:06,726

Across the country, people's

-- people, families, schools,

83

00:04:06,726 --> 00:04:10,136

businesses, communities were

all adjusting to a reality

84

00:04:10,496 --> 00:04:13,446

where we're focused on reducing

the impact of this virus

85

00:04:13,866 --> 00:04:15,286

on all of us, collectively.

86

00:04:16,296 --> 00:04:21,956

As -- you know, many communities

are already experiencing strain

87

00:04:22,336 --> 00:04:25,816

or will experience strain

on their healthcare systems.

88

00:04:26,206 --> 00:04:28,876

These horses are likely going

to be stretched to capacity

89

00:04:29,176 --> 00:04:31,876
at some point in many
parts of the country.

90
00:04:33,026 --> 00:04:36,016
Each of -- you knows that
your tough jobs are only going

91
00:04:36,016 --> 00:04:38,136
to get tougher.

92
00:04:38,136 --> 00:04:40,716
I, and all the staff at
CDC, want to thank you

93
00:04:40,896 --> 00:04:43,056
for the critical
job you are doing.

94
00:04:43,656 --> 00:04:46,526
During any infectious
disease outbreak, you,

95
00:04:46,526 --> 00:04:49,426

on the frontlines, are at
higher risk for exposure

96
00:04:49,956 --> 00:04:52,446
because of the contact you
have with people who are sick.

97
00:04:52,706 --> 00:04:57,046
Sadly, more than 100 cases among
healthcare professionals have

98
00:04:57,046 --> 00:04:58,796
already been reported
to the CDC.

99
00:04:59,956 --> 00:05:01,856
More importantly,
you're the backbone

100
00:05:01,856 --> 00:05:04,306
of any pandemic response.

101
00:05:04,306 --> 00:05:08,896
You, who care for all of

us when we get sick. Today,

102
00:05:08,896 --> 00:05:10,576
CDC experts will be
speaking with you

103
00:05:10,576 --> 00:05:11,986
about the guidance
we've provided

104
00:05:12,626 --> 00:05:15,726
to help providers prioritize
and respond to the pandemic.

105
00:05:16,276 --> 00:05:18,666
We've also worked with
partners to develop tools

106
00:05:18,966 --> 00:05:20,896
to help you make
really difficult

107
00:05:20,896 --> 00:05:22,136
but critical decisions.

108

00:05:23,016 --> 00:05:25,586

We understand that you

will face many challenges

109

00:05:25,586 --> 00:05:29,146

in the coming days as the number

of cases in the U.S. rises.

110

00:05:29,786 --> 00:05:30,966

The health and safety

111

00:05:30,966 --> 00:05:35,106

of our medical professionals

is our number one priority,

112

00:05:35,106 --> 00:05:38,026

as they, in turn,

care for all of us.

113

00:05:38,026 --> 00:05:41,086

CDC and the entire nation

are grateful for you

114

00:05:41,086 --> 00:05:44,016

for the invaluable role

you will play in getting us

115

00:05:44,166 --> 00:05:47,336

through this response and

the sacrifices you will make

116

00:05:47,336 --> 00:05:48,036

to do so.

117

00:05:48,416 --> 00:05:51,596

I'd like to turn the call

back over to Commander Khan.

118

00:05:53,606 --> 00:05:55,356

>> Thank you, Dr. Messonnier

119

00:05:55,356 --> 00:05:58,286

for your clinical

perspective and the update.

120

00:05:58,286 --> 00:06:01,006

I would now like to welcome
Lieutenant Commander Grace

121
00:06:01,006 --> 00:06:02,336
Appiah to present.

122
00:06:02,706 --> 00:06:04,086
Lieutenant Commander,
you may begin.

123
00:06:04,086 --> 00:06:05,576
>> Thank you.

124
00:06:05,756 --> 00:06:10,056
So, I'll provide a brief
update and overview

125
00:06:10,056 --> 00:06:12,846
of the clinical aspects
of COVID-19.

126
00:06:12,846 --> 00:06:16,226
CDC has updated guidance

127

00:06:16,226 --> 00:06:19,046

on discontinuing

transmission based precautions

128

00:06:19,046 --> 00:06:22,906

and discharging hospitalized

patients with COVID-19.

129

00:06:23,376 --> 00:06:24,626

This includes guidance

130

00:06:24,626 --> 00:06:27,326

for severely immunocompromised

patients

131

00:06:27,326 --> 00:06:29,486

who may have prolonged

viral shedding.

132

00:06:30,226 --> 00:06:33,846

This week, CDC also published

information for clinicians

133

00:06:34,306 --> 00:06:37,296
on therapeutic options
for COVID-19 patients.

134
00:06:37,806 --> 00:06:41,296
Summarizing the current data
on two drugs, chloroquine

135
00:06:41,296 --> 00:06:44,776
and hydroxychloroquine, and
the investigational agent,

136
00:06:44,776 --> 00:06:48,386
Remdesivir, these can all
be found on the CDC website.

137
00:06:50,036 --> 00:06:53,426
Healthcare providers and health
department who have questions

138
00:06:53,426 --> 00:06:55,516
about COVID-19, as mentioned,

139
00:06:55,516 --> 00:07:01,076

can also access the CDC COVID-19
clinical call center 24 hours a

140
00:07:01,076 --> 00:07:04,026
day, that number is provided
on the standing slide.

141
00:07:05,536 --> 00:07:08,526
And this call center is
staffed by trained clinicians

142
00:07:08,526 --> 00:07:11,066
who can assist with
questions about CDC guidance.

143
00:07:12,476 --> 00:07:15,846
So, I'll now present the
clinical aspects of COVID-19.

144
00:07:17,296 --> 00:07:21,416
The incubation period for
COVID-19 appears to be

145
00:07:21,416 --> 00:07:25,456

within 14 days of exposure,
with most cases occurring

146
00:07:25,456 --> 00:07:26,966
within four to five days.

147
00:07:27,566 --> 00:07:31,646
While symptoms vary, most
patients will have fever, cough,

148
00:07:31,976 --> 00:07:35,836
myalgia, or fatigue at the
onset of their illness.

149
00:07:36,376 --> 00:07:40,276
GI symptoms are uncommon, but
some patients can have nausea

150
00:07:40,276 --> 00:07:43,046
and vomiting preceding
their respiratory symptoms.

151
00:07:43,866 --> 00:07:45,966
Older adults and persons

152

00:07:45,966 --> 00:07:49,426

with medical comorbidities

may initially have an atypical

153

00:07:49,426 --> 00:07:52,356

presentation with

delayed onset of fever

154

00:07:52,356 --> 00:07:53,936

and respiratory symptoms.

155

00:07:55,586 --> 00:07:59,186

Of note, several studies have

shown SARS SARS-CoV-2 infection

156

00:07:59,286 --> 00:08:01,316

in asymptomatic patients,

157

00:08:01,316 --> 00:08:03,096

so those who never

develop symptoms,

158

00:08:03,476 --> 00:08:06,986
and in pre-symptomatic patients,
those in whom detection

159
00:08:06,986 --> 00:08:09,686
of virus occurred prior to
development of symptoms.

160
00:08:10,646 --> 00:08:12,176
While asymptomatic

161
00:08:12,176 --> 00:08:14,726
and pre-symptomatic
infections have been reported,

162
00:08:14,856 --> 00:08:17,426
their role in transmission
is still unknown.

163
00:08:18,296 --> 00:08:20,676
Risk of transmission
appears to be greatest

164
00:08:20,676 --> 00:08:24,486

when patients are symptomatic,
as viral RNA shedding appears

165
00:08:24,486 --> 00:08:27,936
to be higher at symptom onset
compared to later in illness.

166
00:08:29,646 --> 00:08:32,926
We know the clinical
spectrum of COVID-19 can range

167
00:08:32,926 --> 00:08:35,886
from mild disease with
nonspecific signs and symptoms

168
00:08:35,886 --> 00:08:39,806
to severe pulmonary disease
with respiratory failure

169
00:08:39,806 --> 00:08:43,296
and acute respiratory
distress syndrome, or ARDS.

170
00:08:43,296 --> 00:08:48,516

In a large cohort, so the
largest cohort of patients

171
00:08:48,516 --> 00:08:53,286
in China, this was 44,500
patients with COVID-19 ,

172
00:08:53,286 --> 00:08:57,446
illness severity ranged from
mild in 81% of patients,

173
00:08:57,446 --> 00:09:01,346
to more severe in 14%, who
required hospitalization

174
00:09:01,346 --> 00:09:05,316
and supplemental oxygen,
to critical disease in 5%,

175
00:09:05,376 --> 00:09:08,076
so those with respiratory
failure, shock,

176
00:09:08,076 --> 00:09:10,876

multi-organ failure
requiring ICU admission.

177
00:09:12,066 --> 00:09:15,276
Overall, case fatality
was around 2.3%

178
00:09:15,326 --> 00:09:18,236
and no deaths were reported
in noncritical cases.

179
00:09:19,116 --> 00:09:22,886
Most fatal cases have occurred
in patients with advanced age

180
00:09:22,886 --> 00:09:25,126
or underlying comorbidities.

181
00:09:25,126 --> 00:09:27,516
These include those
with diabetes,

182
00:09:27,516 --> 00:09:30,326
cardiovascular disease,

chronic lung disease,

183
00:09:30,326 --> 00:09:32,266
hypertension, and cancer.

184
00:09:33,176 --> 00:09:36,226
So, we know older age
is a strong risk factors

185
00:09:36,226 --> 00:09:38,896
for severe illness,
but individuals

186
00:09:38,896 --> 00:09:43,046
of any age can have
severe COVID-19.

187
00:09:43,176 --> 00:09:47,266
In children, infections are more
commonly asymptomatic or mild,

188
00:09:47,466 --> 00:09:48,776
although it's unknown
if children

189

00:09:48,776 --> 00:09:50,796

with underlying medical

conditions are

190

00:09:50,796 --> 00:09:52,856

at an increased risk

of severe disease.

191

00:09:53,976 --> 00:09:57,136

In severely and critically

ill patients, complications

192

00:09:57,136 --> 00:10:02,386

of COVID-19 have included

ARDS, sepsis, cardiomyopathy,

193

00:10:02,386 --> 00:10:04,796

arrhythmia, and acute

kidney injury.

194

00:10:04,796 --> 00:10:09,076

In terms of laboratory

and radiographic findings,

195

00:10:09,286 --> 00:10:12,906

lymphopenia is the most

common laboratory abnormality,

196

00:10:13,036 --> 00:10:15,036

that's been seen in about 83%

197

00:10:15,036 --> 00:10:17,136

of hospitalized patients

with COVID-19.

198

00:10:17,136 --> 00:10:20,416

Neutrophilia is also

a marker potentially

199

00:10:20,416 --> 00:10:21,716

of more severe disease.

200

00:10:22,416 --> 00:10:25,906

These patients have also had

elevated transaminases, so AST,

201

00:10:25,906 --> 00:10:29,096
and ALT elevations,
and LDH elevation,

202
00:10:29,366 --> 00:10:32,326
so these also may be markers
of more severe illness.

203
00:10:33,066 --> 00:10:37,166
On chest imaging, patients
typically have bilateral ground

204
00:10:37,166 --> 00:10:40,716
glass opacity seen on
chest CT, but patients

205
00:10:40,716 --> 00:10:43,696
with COVID-19 infection may
also have normal imaging,

206
00:10:43,696 --> 00:10:46,156
particularly early
in their illness.

207

00:10:46,636 --> 00:10:48,416
In terms of management
and treatment,

208
00:10:49,086 --> 00:10:50,586
we know that not all patients

209
00:10:50,586 --> 00:10:52,996
with COVID-19 will
require medical care.

210
00:10:53,596 --> 00:10:55,386
Patients with a mild
presentation

211
00:10:55,386 --> 00:10:58,206
and mild illness may not
need to be hospitalized

212
00:10:58,206 --> 00:10:59,656
and these patients
can likely be --

213
00:10:59,656 --> 00:11:02,316

manage their illness at
home with supportive care.

214
00:11:02,896 --> 00:11:06,206
Some patients though, after
an initially mild clinical

215
00:11:06,206 --> 00:11:09,826
presentation, may worsen during
the second week of illness,

216
00:11:09,826 --> 00:11:12,786
and progress to respiratory
failure, and ARDS.

217
00:11:13,366 --> 00:11:17,046
The extent of monitoring for
such patients should be made

218
00:11:17,046 --> 00:11:20,156
on a case by case basis,
considering their age

219
00:11:20,156 --> 00:11:23,276

and chronic medical conditions
that place them at higher risk

220
00:11:23,276 --> 00:11:24,666
for more severe disease.

221
00:11:24,666 --> 00:11:27,576
In terms of treatment,
so currently,

222
00:11:27,576 --> 00:11:30,716
there are no licensed FDA
approved drugs for COVID-19.

223
00:11:30,716 --> 00:11:34,526
Clinical management for
hospitalized patients is focused

224
00:11:34,526 --> 00:11:36,936
on supportive care
for complications,

225
00:11:36,936 --> 00:11:39,486
including providing

supplemental oxygen for those

226

00:11:39,486 --> 00:11:40,656

with respiratory failure.

227

00:11:41,646 --> 00:11:44,016

Empiric testing and

treatment for other viral

228

00:11:44,016 --> 00:11:46,646

or bacterial etiologies

may be warranted.

229

00:11:47,456 --> 00:11:50,396

Based on the available

data, CDC recommends

230

00:11:50,396 --> 00:11:53,806

that corticosteroids should

be avoided, unless indicated

231

00:11:53,806 --> 00:11:56,626

for another reason, and

this is because of potential

232

00:11:56,626 --> 00:12:00,456

for prolonged viral replication

that was observed in patients

233

00:12:00,456 --> 00:12:02,056

with MERS-CoV and influenza

234

00:12:02,056 --> 00:12:04,406

who were treated

with corticosteroids.

235

00:12:04,766 --> 00:12:06,436

These patients were

also more likely

236

00:12:06,436 --> 00:12:08,086

to receive mechanical

ventilation

237

00:12:08,086 --> 00:12:09,886

and have higher mortality.

238

00:12:11,976 --> 00:12:13,526
Finally, Remdesivir,

239
00:12:13,526 --> 00:12:18,376
so nucleotide analog
investigational drug has broad

240
00:12:18,376 --> 00:12:22,876
antiviral activity and
inhibits viral replication

241
00:12:22,876 --> 00:12:25,836
through termination
of RNA transcription,

242
00:12:25,936 --> 00:12:29,406
so it has activity in
vitro against SARS-CoV-2

243
00:12:29,406 --> 00:12:33,216
and it's currently available
through three clinical trials

244
00:12:33,216 --> 00:12:35,996

or an uncontrolled
compassionate use basis.

245
00:12:35,996 --> 00:12:38,706
It's worth noting that the
manufacturer is currently

246
00:12:38,706 --> 00:12:39,836
transitioning away

247
00:12:39,836 --> 00:12:43,146
from individual compassionate
use request

248
00:12:43,146 --> 00:12:46,446
to an FDA expanded
access proto -- protocol.

249
00:12:46,556 --> 00:12:50,556
So, with that overview of the
clinical aspects of COVID-19,

250
00:12:50,866 --> 00:12:52,736
I'll now turn to Dr. Bell.

251

00:12:58,286 --> 00:13:00,166

>> Thank you very much.

252

00:13:00,166 --> 00:13:03,186

I'm just going to say a few

quick words before we talk

253

00:13:03,276 --> 00:13:06,986

specifically about

protective equipment.

254

00:13:07,176 --> 00:13:08,906

There's a tremendous

amount of attention

255

00:13:08,906 --> 00:13:10,686

to personal protective

equipment right now

256

00:13:11,036 --> 00:13:13,976

with well-recognized

challenges in supply lines.

257

00:13:14,456 --> 00:13:17,436

And Dr. Kuhar and Captain

Delaney will be talking

258

00:13:17,436 --> 00:13:21,386

about some options

for prioritizing

259

00:13:21,726 --> 00:13:24,076

and extending existing supplies.

260

00:13:24,626 --> 00:13:26,806

But before we go to discussions

261

00:13:26,806 --> 00:13:28,306

about personal protective

equipment,

262

00:13:28,306 --> 00:13:31,676

I want to remind everyone that

-- you know, just as always,

263

00:13:32,136 --> 00:13:34,536

this is not our first
line of defense.

264
00:13:34,806 --> 00:13:37,706
And now more than
ever, identifying ways

265
00:13:37,706 --> 00:13:40,826
that we can provide care
for individuals, in --

266
00:13:40,826 --> 00:13:44,596
in a manner that doesn't
require protective equipment,

267
00:13:44,596 --> 00:13:47,326
everything ranging
from telemedicine,

268
00:13:47,676 --> 00:13:52,676
to transparent barriers for
triage, identifying systems

269
00:13:52,676 --> 00:13:55,386

of care that will keep our
healthcare personnel safe,

270
00:13:55,386 --> 00:14:00,066
and -- and prevent
exposures from the get-go,

271
00:14:00,486 --> 00:14:04,726
rather than relying on personal
protective equipment, is --

272
00:14:04,726 --> 00:14:07,316
is a crucial part of
planning and implementation.

273
00:14:07,496 --> 00:14:12,156
In particular, places that don't
traditionally use protective

274
00:14:12,156 --> 00:14:16,166
equipment need to be
thinking about that type

275
00:14:16,166 --> 00:14:19,066

of administrative and
engineering control.

276
00:14:19,066 --> 00:14:20,836
I'm sure both of our
subsequent speakers will --

277
00:14:20,836 --> 00:14:23,286
will reiterate this point, but
whether you're nursing home,

278
00:14:23,286 --> 00:14:27,156
a dialysis facility,
or other location

279
00:14:27,156 --> 00:14:31,606
where patients are seen, but you
don't ordinarily use protective

280
00:14:31,606 --> 00:14:34,096
equipment of the way
we're needing to do now,

281
00:14:34,466 --> 00:14:40,056

identifying ways to both receive
patients, assess them upfront,

282
00:14:40,416 --> 00:14:42,396
and then provide
care in such a way

283
00:14:42,396 --> 00:14:46,586
that exposures are prevented
altogether, if possible.

284
00:14:46,586 --> 00:14:48,626
And certainly, contained

285
00:14:48,626 --> 00:14:52,166
in a systematic way
is very important.

286
00:14:52,276 --> 00:14:55,526
We are seeing, increasingly,
the impact of places

287
00:14:55,526 --> 00:15:00,996
like dialysis facilities on

amplifying transmission and so,

288
00:15:00,996 --> 00:15:04,056
again, finding ways
to flag individuals

289
00:15:04,056 --> 00:15:07,686
who might be infectious, and
provide the necessary care,

290
00:15:07,996 --> 00:15:11,446
for example, at the end of the
day in a specified location

291
00:15:11,796 --> 00:15:15,626
of the dialysis facility by
individuals who are ready

292
00:15:15,626 --> 00:15:19,216
to provide care in a safe
manner using the available PPE,

293
00:15:19,216 --> 00:15:21,856
that kind of approach

is crucial.

294

00:15:22,656 --> 00:15:27,316

Similarly, strategies like

cohorting patients and staff

295

00:15:27,316 --> 00:15:31,386

so that a limited number

of staff need to use PPE

296

00:15:31,576 --> 00:15:33,386

for a concentrated episode

297

00:15:33,386 --> 00:15:36,516

of care is also an

important aspect of this.

298

00:15:36,956 --> 00:15:40,256

I understand that there is

a little bit of difficulty

299

00:15:40,256 --> 00:15:43,646

with audio for our other two

speakers so I'm going to pause

300

00:15:43,646 --> 00:15:45,646

for a moment and see if

they've managed to get on.

301

00:15:46,556 --> 00:15:47,756

Dr. Kuhar, are you there?

302

00:15:48,516 --> 00:17:10,766

[Inaudible]

303

00:17:11,266 --> 00:17:14,976

>> Captain Delaney and Dr.

Kuhar, were you able to join us?

304

00:17:30,156 --> 00:17:33,646

>> For our audience that might

have joined us more recently,

305

00:17:33,646 --> 00:17:36,946

we are waiting for two of our

presenters, Captain Delaney

306

00:17:36,946 --> 00:17:38,846
and Dr. Kuhar to join.

307
00:17:39,236 --> 00:17:39,976
Please stand by.

308
00:18:56,226 --> 00:18:58,556
Captain Delaney, were
you able to join?

309
00:19:01,336 --> 00:19:02,806
>> Hello, this is Lisa.

310
00:19:03,116 --> 00:19:05,236
>> Hi, Captain Delaney,
we can hear you.

311
00:19:05,236 --> 00:19:06,986
Thank you for joining us.

312
00:19:07,046 --> 00:19:10,316
Dr. Kuhar, are you available?

313

00:19:10,316 --> 00:19:11,806

>> I am as well.

314

00:19:12,916 --> 00:19:13,936

>> Thank you, Dr. Kuhar.

315

00:19:13,936 --> 00:19:17,156

Dr. Bell, were you at a point

to turn the presentation

316

00:19:17,156 --> 00:19:19,796

over to our other

colleagues, Dr. Kuhar?

317

00:19:20,426 --> 00:19:21,176

>> Yes, thank you.

318

00:19:21,176 --> 00:19:22,396

Please move ahead.

319

00:19:24,946 --> 00:19:25,636

>> All right.

320

00:19:25,806 --> 00:19:27,736
Well, this is a Dr. David Kuhar.

321
00:19:28,476 --> 00:19:33,516
So, personal protective
equipment or PPE is used

322
00:19:33,516 --> 00:19:36,286
by healthcare personnel daily
to protect themselves, patients,

323
00:19:36,286 --> 00:19:37,896
and others when providing care.

324
00:19:38,436 --> 00:19:41,096
Now PPE helps protect
healthcare personnel

325
00:19:41,096 --> 00:19:44,066
from potentially infectious
patients, laboratory samples,

326
00:19:44,066 --> 00:19:46,926
toxic medications, and other

potentially dangerous substances

327

00:19:46,926 --> 00:19:48,536

that are used in

healthcare delivery.

328

00:19:49,406 --> 00:19:52,796

PPE shortages are currently

posing a tremendous challenge

329

00:19:52,796 --> 00:19:54,056

to our healthcare system.

330

00:19:54,336 --> 00:19:57,536

Healthcare facilities are having

difficulty accessing the needed

331

00:19:57,536 --> 00:20:00,216

equipment and are having

to identify the safest ways

332

00:20:00,216 --> 00:20:02,216

to provide ongoing patient

care during the pandemic.

333

00:20:02,216 --> 00:20:05,436

There are ongoing efforts

across local, state,

334

00:20:05,436 --> 00:20:07,886

and federal public health

officials, coalitions,

335

00:20:07,886 --> 00:20:09,846

and governments to

address these shortages.

336

00:20:09,846 --> 00:20:14,686

Now the CDC optimization

strategies for PPE offer options

337

00:20:14,686 --> 00:20:17,666

for providing ongoing

patient care when PP --

338

00:20:17,666 --> 00:20:20,666

when PPE supplies are

stressed, running low,

339

00:20:20,666 --> 00:20:22,906

or in some instances,

even absent.

340

00:20:22,906 --> 00:20:27,046

Facilities need to understand

their current PPE inventory,

341

00:20:27,046 --> 00:20:29,616

supply chain, and

utilization rate.

342

00:20:30,076 --> 00:20:31,426

They also need to communicate

343

00:20:31,426 --> 00:20:33,616

with local healthcare

coalitions, federal, state,

344

00:20:33,616 --> 00:20:36,806

and local public health partners

regarding identification

345

00:20:36,806 --> 00:20:38,466

of additional supplies,

when needed.

346

00:20:40,076 --> 00:20:46,096

So, CDC offers some contingency

options intended to be use first

347

00:20:46,476 --> 00:20:49,196

and which are aimed at

stretching PPE supplies

348

00:20:49,196 --> 00:20:52,186

when shortages are anticipated,

349

00:20:52,186 --> 00:20:54,676

meaning when facilities

have enough supplies now,

350

00:20:54,676 --> 00:20:56,376

but anticipate they

may not soon,

351

00:20:56,376 --> 00:20:58,326
or may not be able
to acquire more.

352
00:20:59,046 --> 00:21:01,406
Crisis options are also off

353
00:21:01,406 --> 00:21:05,246
that can be considered during
PPE shortages and should be used

354
00:21:05,246 --> 00:21:07,996
with contingency
options, when needed,

355
00:21:07,996 --> 00:21:10,496
to help stretch the
supplies currently available.

356
00:21:10,566 --> 00:21:14,356
So, healthcare personnel
and facilities within

357
00:21:14,416 --> 00:21:16,516

and across regions will
have to work together

358
00:21:16,516 --> 00:21:19,526
to implement strategies
that extend PPE supplies

359
00:21:19,686 --> 00:21:22,396
so that recommended PPE will
be available, when needed.

360
00:21:23,026 --> 00:21:26,406
When using PPE optimization
strategies and understanding

361
00:21:26,406 --> 00:21:28,456
of the limitations
must be provided

362
00:21:28,456 --> 00:21:30,536
to healthcare personnel
before the provision

363
00:21:30,536 --> 00:21:31,846

of patient care activities.

364
00:21:31,846 --> 00:21:34,536
I'm going to talk
about contingency

365
00:21:34,536 --> 00:21:37,816
and crisis strategies for
conserving PPE supplies broadly,

366
00:21:37,816 --> 00:21:39,276
but I'm going to
start by talking

367
00:21:39,276 --> 00:21:41,796
about controlling exposures
in healthcare settings.

368
00:21:41,796 --> 00:21:44,116
So, controlling exposures

369
00:21:44,116 --> 00:21:46,456
to occupational hazards
is a fundamental way

370

00:21:46,456 --> 00:21:47,956

to protect healthcare personnel.

371

00:21:48,246 --> 00:21:51,656

Conventionally, a hierarchy

is used to achieve feasible

372

00:21:51,656 --> 00:21:52,856

and effective controls.

373

00:21:52,856 --> 00:21:56,196

Now this hierarchy of

controls, in order from the most

374

00:21:56,196 --> 00:21:59,516

to least effective, commonly

includes elimination,

375

00:21:59,666 --> 00:22:02,076

substitution, engineering

controls,

376

00:22:02,186 --> 00:22:04,076
administrative controls,
and finally,

377
00:22:04,076 --> 00:22:06,356
personal protective
equipment, which depends

378
00:22:06,356 --> 00:22:09,446
on consistent and correct use.

379
00:22:09,446 --> 00:22:11,626
As patients with
infectious diseases are cared

380
00:22:11,626 --> 00:22:14,706
for in healthcare settings,
eliminating the disease,

381
00:22:14,706 --> 00:22:18,066
or substituting, or replacing it
are not really options; hence,

382
00:22:18,406 --> 00:22:20,436

engineering and administrative
controls

383
00:22:20,436 --> 00:22:23,506
of PPE are relied upon
to reduce exposures.

384
00:22:23,506 --> 00:22:28,166
So, first, facilities should
be maximizing their use

385
00:22:28,326 --> 00:22:31,136
of engineering and
administrative controls

386
00:22:31,136 --> 00:22:33,506
to help extend their
PPE supplies.

387
00:22:33,546 --> 00:22:36,506
For engineering controls,
maximizing use

388
00:22:36,716 --> 00:22:39,506

of physical barriers, like
glass or plastic windows,

389
00:22:39,506 --> 00:22:42,136
can potentially eliminate
the need for PPE use

390
00:22:42,206 --> 00:22:43,796
in selected situations.

391
00:22:43,796 --> 00:22:46,776
This is also about
maintaining ventilation systems.

392
00:22:47,736 --> 00:22:51,516
Administrative controls
include altering work practices,

393
00:22:51,566 --> 00:22:54,916
and they have the
potential to reduce PPE use,

394
00:22:54,916 --> 00:22:58,766
and these include strategies,

such as making ample use

395

00:22:58,766 --> 00:23:00,916

of telephone triage

and telemedicine

396

00:23:00,916 --> 00:23:02,566

to reduce the numbers

of patients going

397

00:23:02,566 --> 00:23:04,996

to healthcare settings

where PPE might be used.

398

00:23:05,736 --> 00:23:08,556

Limiting the numbers of

personnel providing care

399

00:23:08,636 --> 00:23:11,186

and the numbers of patient

encounters might also reduce PPE

400

00:23:11,186 --> 00:23:14,256

use and just such as, you know,

pairing food trade delivery,

401
00:23:14,256 --> 00:23:16,236
and take a patient's
vital signs rather

402
00:23:16,236 --> 00:23:19,876
than having two separate
encounters.

403
00:23:19,876 --> 00:23:23,036
Exclude visitors from facilities
can not only prevent some

404
00:23:23,036 --> 00:23:26,246
who are ill from entering, but
also help ensure PPE is reserved

405
00:23:26,286 --> 00:23:27,576
for care related activities.

406
00:23:27,576 --> 00:23:32,036
As I said earlier, those
expecting PPE shortages

407

00:23:32,036 --> 00:23:33,906

to be applying contingency

strategies

408

00:23:33,906 --> 00:23:35,476

to stretch their supplies,

409

00:23:35,556 --> 00:23:39,486

so options include

canceling elective

410

00:23:39,486 --> 00:23:41,906

and non-urgent procedures

and appointments

411

00:23:42,036 --> 00:23:44,196

to limit patient

provider contacts.

412

00:23:44,626 --> 00:23:47,336

Also, using reusable PPE

413

00:23:47,336 --> 00:23:49,636
that can be reprocessed
has the potential to help,

414
00:23:50,066 --> 00:23:53,636
trying to shift supplies
and use towards equipment

415
00:23:53,636 --> 00:23:57,566
that can be reused, such as long
durable cloth isolation gowns,

416
00:23:57,566 --> 00:24:00,256
reusable goggles, instead
of disposable items,

417
00:24:00,526 --> 00:24:02,406
and reusable respiratory
protection,

418
00:24:02,406 --> 00:24:04,976
like powered air purifying
respirators, or PAPRs,

419

00:24:05,106 --> 00:24:08,866
as the potential to preserve
PPE availability, and reduce,

420
00:24:08,866 --> 00:24:11,546
or even eliminate the burn
rate for disposable items.

421
00:24:12,516 --> 00:24:15,606
Additionally, introducing
new disposable supplies,

422
00:24:15,606 --> 00:24:18,286
such as international
gowns, or even coveralls,

423
00:24:18,286 --> 00:24:20,276
which aren't used in
most healthcare settings,

424
00:24:20,276 --> 00:24:23,066
are an option, but personnel
will need to be trained

425

00:24:23,066 --> 00:24:24,536
and demonstrate competency

426
00:24:24,536 --> 00:24:26,386
in the safe use of
all new products.

427
00:24:27,786 --> 00:24:30,676
Source control or offering
symptomatic patients

428
00:24:30,676 --> 00:24:32,906
of facemask remains
recommended for patients

429
00:24:32,906 --> 00:24:35,586
who have respiratory
symptoms but alterations

430
00:24:35,906 --> 00:24:38,546
in how this is implemented
could reduce PPE use.

431
00:24:38,546 --> 00:24:41,616

And facilities can reserve
personal protective equipment

432
00:24:41,616 --> 00:24:44,266
or face masks for use
by healthcare personnel

433
00:24:44,516 --> 00:24:47,956
and replace PPE in patient areas
with other barrier precautions,

434
00:24:47,956 --> 00:24:50,666
such as tissues, and
potentially save supplies.

435
00:24:50,666 --> 00:24:53,846
Expired personal
protective equipment

436
00:24:53,846 --> 00:24:57,936
or personal protective equipment
that's beyond the manufacturer's

437
00:24:57,936 --> 00:25:00,136

designated shelf life
can still be useful.

438
00:25:00,136 --> 00:25:03,386
Healthcare personnel
PPE training is needed.

439
00:25:03,386 --> 00:25:06,836
Expired items could be used
for training, rather than using

440
00:25:06,836 --> 00:25:09,126
and discarding non-expired
equipment

441
00:25:09,126 --> 00:25:11,106
that would be better
preserved for patient care.

442
00:25:12,746 --> 00:25:16,916
Facilities can allow healthcare
personnel to extend use of --

443
00:25:17,226 --> 00:25:19,846

or respirators, face

masks, and eye protection,

444

00:25:19,886 --> 00:25:21,956

beyond single patient contacts.

445

00:25:22,506 --> 00:25:25,146

Extended use of these devices

to cover the face comes

446

00:25:25,146 --> 00:25:27,316

with challenges and limitations.

447

00:25:27,746 --> 00:25:30,116

Healthcare personnel

have to take care not

448

00:25:30,116 --> 00:25:32,256

to touch extended

wear facemasks,

449

00:25:32,256 --> 00:25:33,776

eye protection, or respirator.

450

00:25:34,266 --> 00:25:36,696

And healthcare personnel have

to perform hand hygiene before

451

00:25:36,696 --> 00:25:39,316

and after adjusting or

touching any used equipment.

452

00:25:39,656 --> 00:25:40,896

Damage or soiled equipment,

453

00:25:40,896 --> 00:25:43,206

such as a face mask,

need to be discarded.

454

00:25:45,226 --> 00:25:48,556

Healthcare facilities

experiencing actual personal

455

00:25:48,556 --> 00:25:50,436

protective equipment

shortages need

456

00:25:50,436 --> 00:25:52,406
to consider crisis strategies

457
00:25:52,446 --> 00:25:54,886
with careful planning
before implementation.

458
00:25:55,836 --> 00:25:59,086
Crisis strategies may pose
more risk for transmission

459
00:25:59,086 --> 00:26:00,996
between healthcare personnel
and patients and need

460
00:26:00,996 --> 00:26:03,486
to be well thought out
before they are used.

461
00:26:04,176 --> 00:26:06,096
Now among the possibilities,

462
00:26:06,096 --> 00:26:10,926
facilities can consider using

intact personal protective

463
00:26:10,926 --> 00:26:14,146
equipment that is beyond the
manufacturer's designated shelf

464
00:26:14,146 --> 00:26:16,226
life for patient
care activities.

465
00:26:16,226 --> 00:26:19,836
If implemented, the equipment
needs to be inspected prior

466
00:26:19,836 --> 00:26:22,436
for use for defects, such
as degraded materials

467
00:26:22,436 --> 00:26:23,496
and visible tears.

468
00:26:23,496 --> 00:26:28,146
Facilities can carefully
prioritize PPE use

469

00:26:28,426 --> 00:26:32,726

for selected care activities,

such as reserving sterile gowns

470

00:26:32,836 --> 00:26:35,406

and gloves for urgent

sterile patient procedures,

471

00:26:35,406 --> 00:26:39,726

like surgery, using respirators

for higher risk activities,

472

00:26:39,726 --> 00:26:43,016

like aerosol generating

procedures, and for caring

473

00:26:43,016 --> 00:26:46,326

for patients with other known

airborne transmitted diseases,

474

00:26:46,386 --> 00:26:48,466

like tuberculosis, measles.

475

00:26:49,726 --> 00:26:54,276

Limited reuse of disposable

PPE can also be considered.

476

00:26:54,786 --> 00:26:58,066

Limited reuse of disposable

personal protective equipment,

477

00:26:58,066 --> 00:27:00,816

the practice of using the

same piece of equipment

478

00:27:00,816 --> 00:27:03,556

for multiple encounters

with different patients,

479

00:27:03,766 --> 00:27:05,506

and removing it after

each encounter,

480

00:27:05,816 --> 00:27:09,196

now not all personal protective

equipment items are amenable

481

00:27:09,196 --> 00:27:11,536

to this approach,

disposable face masks,

482

00:27:11,536 --> 00:27:13,616

or gowns with ties can

be prone to ripping

483

00:27:14,256 --> 00:27:15,556

when untying is attempted.

484

00:27:16,386 --> 00:27:18,926

Additionally, there

are potential risks

485

00:27:18,926 --> 00:27:20,846

for contact transmission

for devices

486

00:27:20,846 --> 00:27:23,046

that might not be

amenable to reprocessing.

487

00:27:24,076 --> 00:27:26,826
Allowed that some items, such
as a disposable face shield,

488
00:27:26,826 --> 00:27:29,196
might be amenable to
cleaning and disinfection,

489
00:27:29,376 --> 00:27:31,986
but there aren't typically
manufacturer instructions

490
00:27:31,986 --> 00:27:35,216
for how to do so for disposable
items, as this wasn't intended.

491
00:27:35,596 --> 00:27:38,766
A reprocessing strategy would
need to be carefully developed.

492
00:27:40,146 --> 00:27:42,396
If no commercial
PPE is available,

493

00:27:42,396 --> 00:27:44,296
facilities may carefully
consider

494
00:27:44,296 --> 00:27:47,036
if alternative approaches,
such as homemade masks,

495
00:27:47,036 --> 00:27:49,216
will reduce the --
reduce the risk

496
00:27:49,216 --> 00:27:50,986
of healthcare personnell
exposures and

497
00:27:50,986 --> 00:27:52,726
or even safe for patient care.

498
00:27:52,966 --> 00:27:56,306
Additional options and details
are provided on the CDC website.

499
00:27:57,096 --> 00:27:59,916

I'm going to now hand things
over to Captain Delaney.

500
00:28:04,306 --> 00:28:08,756
>> I'm going to use my time to
speak them in a bit more detail

501
00:28:08,756 --> 00:28:11,306
on strategies or options
for reducing the demand

502
00:28:11,306 --> 00:28:14,316
for disposable and 95 filtering
facepiece respirator --

503
00:28:14,316 --> 00:28:17,586
respirators, commonly
called N95 respirators.

504
00:28:17,976 --> 00:28:21,096
As Dr. Kuhar mentioned,
CDC issued guidance titled,

505
00:28:21,096 --> 00:28:23,056

Strategies for Optimizing
the Supply

506
00:28:23,056 --> 00:28:26,036
of N95 respirators just
posted on our website,

507
00:28:26,036 --> 00:28:28,376
along with a companion
checklist which is intended

508
00:28:28,376 --> 00:28:31,876
to help healthcare facilities
prioritize the implementation

509
00:28:31,876 --> 00:28:34,316
of the strategies outlined
in the primary guidance.

510
00:28:34,316 --> 00:28:37,146
Both of these documents can
be found on the COVID --

511
00:28:37,336 --> 00:28:40,986

CDC COVID website in the
healthcare professional section.

512
00:28:41,646 --> 00:28:44,366
Our hope is that you will
consider how you can implement

513
00:28:44,366 --> 00:28:45,826
the options presented
in the guidance

514
00:28:45,826 --> 00:28:47,446
to extend your current
respirators

515
00:28:47,446 --> 00:28:48,846
until more become available.

516
00:28:49,496 --> 00:28:52,026
First, I'd like to start off
by describing the difference

517
00:28:52,026 --> 00:28:53,896
between respirators

and face masks.

518

00:28:53,896 --> 00:28:56,476

N95 respirators reduce

the wearer's exposure

519

00:28:56,476 --> 00:28:59,056

to airborne particles from

small particle aerosols

520

00:28:59,056 --> 00:29:00,676

to large droplets.

521

00:29:00,676 --> 00:29:03,756

N95 respirators are tight

fitting respirators that filter

522

00:29:03,756 --> 00:29:06,356

out at least 95% of

particles in the air,

523

00:29:06,436 --> 00:29:08,016

including large and

small particles.

524

00:29:08,756 --> 00:29:10,106

Before using a respirator,

525

00:29:10,106 --> 00:29:12,186

workers must have a

medical evaluation

526

00:29:12,186 --> 00:29:14,616

to make sure they are able

to wear a respirator safely.

527

00:29:14,946 --> 00:29:17,766

Workers must pass a fit test

to confirm a proper seal.

528

00:29:18,156 --> 00:29:20,956

When properly fitted and

worn, minimal leakage occurs

529

00:29:20,956 --> 00:29:23,356

around edges of the respirator

when the user inhales.

530

00:29:24,396 --> 00:29:26,886

Unlike respirators,

facemasks are loose fitting

531

00:29:26,886 --> 00:29:29,836

and provide only barrier

protection against droplets,

532

00:29:29,836 --> 00:29:31,576

including large respiratory

particles.

533

00:29:31,646 --> 00:29:35,146

No fit testing or still check

is necessary with facemasks

534

00:29:35,146 --> 00:29:37,376

and most facemasks do not

effectively filter small

535

00:29:37,376 --> 00:29:40,106

particles from the air

and do not prevent leakage

536

00:29:40,106 --> 00:29:42,256

around the edge of the

mask when the user inhales.

537

00:29:42,986 --> 00:29:45,276

Dr. Kuhar nicely

described the administrative

538

00:29:45,276 --> 00:29:48,326

and engineering options

of reducing the need

539

00:29:48,326 --> 00:29:51,866

for respirators but we

are hearing that lots

540

00:29:51,866 --> 00:29:54,336

of respirators are being

used in healthcare I want

541

00:29:54,336 --> 00:29:58,716

to just reemphasize that there

are many options beyond focusing

542

00:29:58,716 --> 00:30:01,046

on respirators, like limiting

the number of patients going

543

00:30:01,046 --> 00:30:03,236

to the hospital,

utilizing telemedicine,

544

00:30:03,236 --> 00:30:04,416

or outpatient settings,

545

00:30:04,866 --> 00:30:07,356

excluding healthcare

personnel not directly involved

546

00:30:07,356 --> 00:30:10,486

in patient care, excluding

visitors to patients with known

547

00:30:10,486 --> 00:30:13,956

or suspected COVID-19,

cohorting patients,

548

00:30:13,956 --> 00:30:15,936
and properly maintaining
ventilation systems

549
00:30:15,936 --> 00:30:17,366
to provide air movement
in a clean

550
00:30:17,366 --> 00:30:19,376
to contaminated flow direction.

551
00:30:20,706 --> 00:30:22,286
Under conventional strategies,

552
00:30:22,286 --> 00:30:25,936
specific respirator conservation
strategies have very limited

553
00:30:25,936 --> 00:30:28,816
impact to a facility, include
limiting respirator use

554
00:30:28,816 --> 00:30:29,546
during training.

555

00:30:29,546 --> 00:30:31,376

So, for example,

if you're training

556

00:30:31,376 --> 00:30:34,736

in fit testing are conducted

in two separate steps,

557

00:30:34,736 --> 00:30:36,676

it's possible to

allow limited reuse

558

00:30:36,676 --> 00:30:39,346

of the same respirator you

use by individual both --

559

00:30:39,346 --> 00:30:41,266

during both of the steps.

560

00:30:41,266 --> 00:30:44,196

Using alternatives to N95

respirators, where feasible,

561

00:30:44,196 --> 00:30:47,616

that provide equivalent or

higher protection than an N95,

562

00:30:48,226 --> 00:30:51,676

examples include using other

disposable respirators.

563

00:30:52,106 --> 00:30:54,716

These include disposable

respirators commonly used

564

00:30:54,716 --> 00:30:57,326

in industrial settings that

have a filter nomenclature

565

00:30:57,326 --> 00:31:00,896

of N99, N100, P99, P100.

566

00:31:00,896 --> 00:31:05,166

Many filtering facepiece

respirators have exhalation

567

00:31:05,546 --> 00:31:07,316
valves though and that
should not be used

568
00:31:07,316 --> 00:31:10,506
in the surgical setting
because the ability

569
00:31:10,506 --> 00:31:12,986
to allow unfiltered exhaled
breath would compromise the

570
00:31:12,986 --> 00:31:13,756
sterile field.

571
00:31:14,576 --> 00:31:16,456
Using elastomeric respirators,

572
00:31:16,456 --> 00:31:18,706
these are tight fitting
respirators that are made

573
00:31:18,706 --> 00:31:22,026
of synthetic or rubber material,

which allows them to be cleaned,

574
00:31:22,026 --> 00:31:23,576
disinfected, and reused.

575
00:31:24,076 --> 00:31:26,586
They are equipped with
replaceable filter cartridges.

576
00:31:26,716 --> 00:31:31,136
So, you have to account for the
additional pieces of equipment

577
00:31:31,136 --> 00:31:32,576
that -- that go with
that respirator.

578
00:31:32,836 --> 00:31:35,196
And there's powered air
purifying respirators,

579
00:31:35,196 --> 00:31:36,356
which are another option.

580

00:31:36,546 --> 00:31:38,146

PAPRs are usable resp --

581

00:31:38,146 --> 00:31:40,766

reusable respirators that

are typically loose fitting

582

00:31:41,156 --> 00:31:44,486

and they do not require

fit testing.

583

00:31:44,606 --> 00:31:47,566

They have a battery power

with a blower that pulls air

584

00:31:47,636 --> 00:31:49,936

through a filter or cartridge.

585

00:31:50,496 --> 00:31:53,256

So, under contingency

and crisis capacity care,

586

00:31:53,256 --> 00:31:56,426

which are implemented when
N95 supplies are running low

587
00:31:56,426 --> 00:32:00,406
or are unavailable, respirator
conservation actions include

588
00:32:00,406 --> 00:32:03,436
using in N95s after their
manufacturer designated shelf

589
00:32:03,436 --> 00:32:05,586
life for just training
and fit testing.

590
00:32:05,966 --> 00:32:08,536
Extending the use
N95s, and what we mean

591
00:32:08,536 --> 00:32:10,776
by this is repeated
close contact encounters

592
00:32:10,776 --> 00:32:14,126

with several patients, the
same respirator can be worn

593
00:32:14,126 --> 00:32:15,566
when caring for multiple
patients

594
00:32:15,566 --> 00:32:18,116
without taking off the
respirator between patient care.

595
00:32:18,866 --> 00:32:21,676
When using respirators
approved under standards used

596
00:32:21,676 --> 00:32:23,996
in other countries
that are similar to N95

597
00:32:24,236 --> 00:32:26,566
or NIOSH approved N95s,

598
00:32:26,566 --> 00:32:29,236
other countries approve

respirators for occupational use

599
00:32:29,236 --> 00:32:31,616
and approve respirators
to these standards.

600
00:32:31,806 --> 00:32:34,446
And a list of respirators
approved by other countries

601
00:32:34,446 --> 00:32:36,436
but expected to provide
providers --

602
00:32:36,436 --> 00:32:38,566
protect providers can be found

603
00:32:38,596 --> 00:32:42,856
in the optimization guidance
using N95 respirators beyond the

604
00:32:42,856 --> 00:32:46,636
manufacturer designated shelf
life for patients with COVID-19.

605

00:32:46,836 --> 00:32:49,806

We recognize that respirators

beyond the manufacturer

606

00:32:49,806 --> 00:32:52,866

designated shelf life may not

perform to the requirements

607

00:32:52,866 --> 00:32:54,086

for which they were certified.

608

00:32:54,406 --> 00:32:57,256

Over time, components, such as

straps and nose bridge material,

609

00:32:57,256 --> 00:33:00,486

may degrade, which can affect

the quality of the fit and seal.

610

00:33:01,046 --> 00:33:04,466

However, many models found in

national or local stockpiles

611

00:33:04,466 --> 00:33:07,386

and stockpiles at healthcare

facilities have been tested

612

00:33:07,386 --> 00:33:10,996

by CDC NIOSH and were found

to continue to perform

613

00:33:10,996 --> 00:33:13,246

in accordance with NIOSH

performance standards.

614

00:33:14,116 --> 00:33:16,456

Limited reuse of

N95 respirators,

615

00:33:16,456 --> 00:33:19,316

when caring for patients with

COVID, might become necessary,

616

00:33:19,546 --> 00:33:22,476

and what we mean here is that

the respirator would be put on

617

00:33:22,476 --> 00:33:24,596

or taken off between

patient encounters.

618

00:33:25,066 --> 00:33:26,876

We recognize that this

[inaudible] challenges

619

00:33:26,876 --> 00:33:30,406

in handling a potentially

contaminated device is unknown

620

00:33:30,406 --> 00:33:33,356

what the potential contribution

of contact transmission is

621

00:33:33,356 --> 00:33:36,606

for SARS-CoV-2 and

caution should be used.

622

00:33:36,796 --> 00:33:40,586

And lastly, prioritizing use

the use of N95 respirators

623

00:33:40,586 --> 00:33:43,646

and face masks by activity

type for healthcare providers

624

00:33:43,646 --> 00:33:45,406

with the highest

potential exposures,

625

00:33:46,186 --> 00:33:47,196

including being present

626

00:33:47,196 --> 00:33:49,706

in the room during aerosol

generating procedures performed

627

00:33:49,706 --> 00:33:51,356

on systematic persons.

628

00:33:52,896 --> 00:33:55,416

The outbreak of COVID-19

has led to a disruption

629

00:33:55,416 --> 00:33:58,426

in the global supply chain of
personal protective equipment,

630
00:33:58,426 --> 00:34:01,026
like N95 facemasks and gowns.

631
00:34:01,456 --> 00:34:04,636
CDC recognizes that healthcare
facilities may experience

632
00:34:04,636 --> 00:34:06,466
temporary shortages,
even if they do not care

633
00:34:06,466 --> 00:34:07,666
for patients with COVID.

634
00:34:08,096 --> 00:34:10,616
We know many of you are facing
unprecedented challenges

635
00:34:10,616 --> 00:34:12,046
around these shortages
and wanted

636

00:34:12,046 --> 00:34:15,016

to share work that's being done

out of CDC's National Institute

637

00:34:15,016 --> 00:34:17,526

for Occupational

Safety and Health.

638

00:34:17,526 --> 00:34:20,076

NIOSH is the federal agency

that certifies respirators used

639

00:34:20,076 --> 00:34:23,186

in the U.S. NIOSH carries

out respirator testing,

640

00:34:23,186 --> 00:34:25,606

including ensuring filter

efficiency standards are met

641

00:34:25,726 --> 00:34:28,706

by manufacturers of

respirators, NIOSH is focused

642

00:34:28,706 --> 00:34:31,266

on supporting existing

respirator approval holders

643

00:34:31,616 --> 00:34:35,316

by working with these respirator

manufacturers to support efforts

644

00:34:35,506 --> 00:34:37,826

to increase their

ongoing surge production.

645

00:34:38,316 --> 00:34:39,666

We're also pursuing ways

646

00:34:39,666 --> 00:34:42,616

to quickly evaluate new

respirator applications

647

00:34:42,616 --> 00:34:44,656

to increase the inventory

of respirators,

648

00:34:45,166 --> 00:34:46,916

providing up to date

PPE guidance,

649

00:34:47,186 --> 00:34:48,816

and conducting research

and evaluation

650

00:34:48,816 --> 00:34:51,316

to maximize the impact

across the nation.

651

00:34:52,426 --> 00:34:55,236

This is just one hot

off the presses update

652

00:34:55,236 --> 00:34:56,146

that I wanted to provide.

653

00:34:56,146 --> 00:34:57,376

Earlier today, we posted

654

00:34:57,376 --> 00:34:59,806

on our website a personal

protective equipment Burn

655

00:34:59,806 --> 00:35:00,696

rate calculator.

656

00:35:01,136 --> 00:35:03,446

This tool was developed to

help healthcare providers

657

00:35:03,446 --> 00:35:05,236

and systems estimate the amount

658

00:35:05,236 --> 00:35:07,696

of personal protective equipment

they are using over time,

659

00:35:08,016 --> 00:35:10,936

it's also referred to as

Burn rate, and it can be used

660

00:35:10,936 --> 00:35:12,886

to assist healthcare and

non-healthcare facilities

661

00:35:12,886 --> 00:35:16,466

to plan and optimize the use of

PPE, this is just one example

662

00:35:16,466 --> 00:35:21,276

of tools that we're -- we're

hoping can help you manage

663

00:35:21,546 --> 00:35:23,306

and understand the --

664

00:35:23,306 --> 00:35:25,666

your inventory of personal

protective equipment.

665

00:35:25,976 --> 00:35:27,976

So, with that, I'll turn it

back over to our operator.

666

00:35:33,206 --> 00:35:34,326

>> Thank you very much.

667

00:35:34,326 --> 00:35:36,226
I want to thank all
our presenters

668
00:35:36,226 --> 00:35:39,336
for providing our audience
with such useful information

669
00:35:39,336 --> 00:35:41,646
on this rapidly evolving
pandemic.

670
00:35:41,646 --> 00:35:42,586
We appreciate your time

671
00:35:42,586 --> 00:35:44,636
and value your clinical
insights on this matter.

672
00:35:44,636 --> 00:35:46,666
We will now go into
our Q&A session.

673
00:35:46,826 --> 00:35:48,896

Audience, please remember
you may submit questions

674
00:35:48,896 --> 00:35:50,946
through the webinar system
by clicking Q&A button

675
00:35:50,946 --> 00:35:53,856
at the bottom of your screen
and then typing your question.

676
00:35:54,086 --> 00:35:57,246
We have quite a few
questions coming

677
00:35:57,246 --> 00:36:00,246
in about the clinical
presentation so I'm going

678
00:36:00,246 --> 00:36:03,876
to sum them up into what
guidance would you have

679
00:36:03,876 --> 00:36:06,586

for our audience if they

ask you that they want

680

00:36:06,586 --> 00:36:08,876

to know what they should know

681

00:36:08,876 --> 00:36:11,886

about when someone is

infectious with COVID-19.

682

00:36:13,536 --> 00:36:16,826

>> This is Lieutenant

Commander Appiah.

683

00:36:16,976 --> 00:36:20,836

So, we know that people

are likely most infectious

684

00:36:20,836 --> 00:36:25,396

when they're most symptomatic,

but the onset and duration

685

00:36:25,396 --> 00:36:29,186

of that infectivity

are still unknown.

686

00:36:29,506 --> 00:36:33,276

With MERS-CoV, and

other SARS-CoV,

687

00:36:33,276 --> 00:36:36,796

we've seen that RNA

can be detected

688

00:36:36,796 --> 00:36:39,676

in the respiratory tract

for weeks after illness.

689

00:36:40,356 --> 00:36:43,556

But this RNA detection

doesn't necessarily mean

690

00:36:43,556 --> 00:36:45,096

that it's infectious virus.

691

00:36:46,146 --> 00:36:49,246

We do know though -- and from

the data we have available --

692

00:36:49,246 --> 00:36:50,766

that the incubation period

693

00:36:50,766 --> 00:36:54,976

for SARS-CoV-2 likely ranges

somewhere from 2 to 14 days.

694

00:36:54,976 --> 00:37:00,146

But as said, it's also unknown

those who have asymptomatic,

695

00:37:00,146 --> 00:37:01,466

pre-symptomatic infection,

696

00:37:01,466 --> 00:37:03,256

how does that play

into transmission?

697

00:37:07,586 --> 00:37:08,456

>> Thank you for that.

698

00:37:08,756 --> 00:37:11,466

We have questions related
to outpatient clinics

699
00:37:11,466 --> 00:37:15,176
and our audiences would
like to know, at what point,

700
00:37:15,176 --> 00:37:17,776
would you recommend that
outpatient clinics begin

701
00:37:17,776 --> 00:37:19,916
to cancel their routine visits?

702
00:37:37,136 --> 00:37:39,746
I can repeat the
question, if needed.

703
00:37:40,346 --> 00:37:43,456
In an outpatient
clinic setting,

704
00:37:43,456 --> 00:37:45,376
at what point would

you recommend

705

00:37:45,376 --> 00:37:48,326

that they cancel their

routine or non-sick visits?

706

00:37:50,126 --> 00:37:50,556

>> I'm sorry.

707

00:37:50,556 --> 00:37:53,116

This -- this is Dr. David

Kuhar, can you hear me?

708

00:37:53,166 --> 00:37:55,766

>> Yes, Dr. Kuhar,

we can hear you.

709

00:37:56,206 --> 00:37:56,826

>> Excellent.

710

00:37:56,956 --> 00:38:00,946

Now would be that

time and facilities

711

00:38:00,946 --> 00:38:04,006

and clinicians should prioritize

urgent and emergency visits

712

00:38:04,006 --> 00:38:07,036

and procedures now and for

the coming several weeks.

713

00:38:07,486 --> 00:38:10,656

And doing so can preserve staff

personal protective equipment

714

00:38:10,656 --> 00:38:11,976

and patient care supplies.

715

00:38:14,816 --> 00:38:16,036

>> Thank you very much.

716

00:38:16,326 --> 00:38:20,546

Along similar lines but

more in a hospital setting,

717

00:38:20,546 --> 00:38:25,856

we have questions about, when
can we discharge patients

718
00:38:25,856 --> 00:38:27,996
with confirmed COVID-19?

719
00:38:29,656 --> 00:38:32,296
>> This is Lieutenant
Commander Appiah.

720
00:38:32,296 --> 00:38:34,326
So, patients can be discharged

721
00:38:34,326 --> 00:38:37,766
from the hospital whenever
clinically indicated.

722
00:38:37,766 --> 00:38:39,676
If discharging to home,
while they're still

723
00:38:39,676 --> 00:38:41,256
on isolation precautions,

724

00:38:41,256 --> 00:38:44,686

clinicians should also

consider the patient's ability

725

00:38:44,686 --> 00:38:46,866

to adhere to those precautions.

726

00:38:49,336 --> 00:38:50,106

>> Thank you.

727

00:38:50,106 --> 00:38:53,676

A follow-up question

on hospital patients.

728

00:38:53,776 --> 00:38:54,996

Are there recommendations

729

00:38:54,996 --> 00:38:57,546

for how long a patient

room should be shut

730

00:38:57,546 --> 00:39:00,666

down after seeing

a COVID-19 patient,

731
00:39:00,666 --> 00:39:02,356
discharged from the
room, that is?

732
00:39:04,186 --> 00:39:06,916
>> Yes. This is a
Dr. David Kuhar.

733
00:39:06,916 --> 00:39:10,296
So, the contribution of
small respirable particles

734
00:39:10,296 --> 00:39:13,846
to close proximity tran --
transmission is uncertain.

735
00:39:14,116 --> 00:39:16,036
An airborne transmission
from person to person

736
00:39:16,036 --> 00:39:18,166
over long distances is

thought to be unlikely.

737

00:39:18,576 --> 00:39:21,706

The amount of time

that the air inside

738

00:39:21,706 --> 00:39:25,036

of an examination room remains

potentially infectious it isn't

739

00:39:25,036 --> 00:39:29,076

known and may depend on a

number of factors, like size

740

00:39:29,076 --> 00:39:31,556

of the room, the number

of air changes per hour,

741

00:39:32,046 --> 00:39:33,666

and how long the

patient was in the room,

742

00:39:34,196 --> 00:39:37,166

even if the patient was

coughing or sneezing,

743
00:39:37,166 --> 00:39:39,666
and if aerosol generating
procedures are performed.

744
00:39:39,666 --> 00:39:43,136
So, facilities need to consider these factors

745
00:39:43,136 --> 00:39:46,636
when deciding when the vacated
room can be entered by someone

746
00:39:46,636 --> 00:39:49,106
who is not wearing personal
protective equipment.

747
00:39:49,106 --> 00:39:52,406
So, for a patient who is
not coughing or sneezing,

748
00:39:52,506 --> 00:39:54,866
did not undergo an aerosol
generating procedure,

749

00:39:54,866 --> 00:39:57,216

and occupied a room for

a short period of time

750

00:39:57,216 --> 00:40:00,426

with a few minutes, any

risk to healthy personnel

751

00:40:00,426 --> 00:40:02,376

and subsequent patients

likely dissipates

752

00:40:02,376 --> 00:40:03,566

over a matter of minutes.

753

00:40:03,966 --> 00:40:07,436

However, for a patient who is

coughing, and remained in a room

754

00:40:07,436 --> 00:40:08,836

for a longer period of time,

755

00:40:08,836 --> 00:40:11,206
or underwent an aerosol
generating procedure,

756
00:40:11,536 --> 00:40:13,156
the risk period is
likely longer.

757
00:40:13,156 --> 00:40:16,466
And for these higher risk
scenarios, it's reasonable

758
00:40:16,466 --> 00:40:20,236
to apply similar time period,
as is used for pathogens spread

759
00:40:20,236 --> 00:40:22,626
by the airborne routes,
like tuberculosis

760
00:40:23,206 --> 00:40:26,136
to restrict personnel
and patients without PPE

761

00:40:26,136 --> 00:40:28,866
from entering the room, until
sufficient time has

762
00:40:29,246 --> 00:40:31,626
elapsed for enough air changes

763
00:40:31,626 --> 00:40:34,076
to remove potentially
infectious particles

764
00:40:34,406 --> 00:40:36,316
and the infection
control guideline

765
00:40:36,316 --> 00:40:38,546
for healthcare settings
online has a link

766
00:40:38,736 --> 00:40:41,686
with table indicates
those time periods.

767
00:40:43,566 --> 00:40:45,896

>> Thank you, Dr. Kuhar.

768

00:40:46,056 --> 00:40:50,386

Along the lines of PPE,

we have a question,

769

00:40:51,026 --> 00:40:54,336

can I decontaminate a

disposable respirator?

770

00:40:55,906 --> 00:40:57,666

>> Great. That's

a great question.

771

00:40:57,726 --> 00:40:59,436

I know we've been

seeing a lot in the news

772

00:40:59,436 --> 00:41:02,536

and we've been receiving a

lot of questions here at CDC.

773

00:41:02,996 --> 00:41:05,176

We know healthcare providers

are interested in ways

774

00:41:05,176 --> 00:41:06,586

to decontaminate

their respirators

775

00:41:06,586 --> 00:41:08,126

so that they can

safely be re-worn.

776

00:41:08,616 --> 00:41:11,496

While a respirator may look like

a very fairly simple device,

777

00:41:11,496 --> 00:41:13,956

they're -- they are actually

quite complex, the designs,

778

00:41:13,956 --> 00:41:16,066

and the filter media

vary by manufacturer,

779

00:41:16,066 --> 00:41:17,346

and this makes it challenging

780

00:41:17,346 --> 00:41:19,596

to develop a single

disinfection method

781

00:41:19,596 --> 00:41:21,106

that would apply to all models.

782

00:41:21,536 --> 00:41:24,076

And at present, there are

no CDC approved methods

783

00:41:24,076 --> 00:41:27,456

for decontaminating disposable

respirators prior to reuse.

784

00:41:27,756 --> 00:41:30,676

Disinfection methods can result

in changes to the respirator

785

00:41:30,676 --> 00:41:32,696

that may impact its

level of protection.

786

00:41:33,006 --> 00:41:34,706

The changes may impact

performance

787

00:41:34,706 --> 00:41:37,346

of the filtering material

or impact the pressure drop

788

00:41:37,346 --> 00:41:40,096

across the respirator, which

would impact your ability

789

00:41:40,096 --> 00:41:41,436

to easily breathe through it.

790

00:41:41,826 --> 00:41:44,726

It may also degrade the straps,

the nose bridge material,

791

00:41:44,726 --> 00:41:47,236

or strap attachments which could

impact how well the respirator

792

00:41:47,236 --> 00:41:48,086
fits to the face.

793
00:41:48,806 --> 00:41:52,096
Only respirator manufacturers
can reliably provide guidance

794
00:41:52,096 --> 00:41:54,716
on how their -- their materials
may degrade by cleaning

795
00:41:54,716 --> 00:41:55,576
and -- and disinfection.

796
00:41:55,576 --> 00:42:00,836
NIOSH and other researchers have
investigated the impact particle

797
00:42:00,836 --> 00:42:03,946
penetration across the
filter and facepiece fit

798
00:42:03,946 --> 00:42:07,846
of disposable respirators

following various

799
00:42:07,896 --> 00:42:09,076
decontamination methods.

800
00:42:09,336 --> 00:42:10,856
The most promising
methods

801
00:42:10,856 --> 00:42:14,686
are vaporous hydrogen
peroxide, ultraviolet

802
00:42:14,756 --> 00:42:17,786
germicidal irradiation,
and ethylene oxide.

803
00:42:17,786 --> 00:42:20,166
However, NIOSH cannot
attest to the ability

804
00:42:20,166 --> 00:42:23,286
to reduce viable virus or
bacteria on the respirator

805

00:42:23,406 --> 00:42:24,926

after decontamination.

806

00:42:25,096 --> 00:42:29,806

Several companies are scaling up

the vaporized hydrogen peroxide

807

00:42:29,806 --> 00:42:32,366

and the ultraviolet

germicidal irradiation methods

808

00:42:32,856 --> 00:42:34,566

to decontaminate respirators.

809

00:42:35,066 --> 00:42:37,406

One cautionary note

is that any use

810

00:42:37,406 --> 00:42:40,216

of ethylene oxide should

be accompanied by studies

811

00:42:40,216 --> 00:42:42,426
to ensure no off gassing
into the breathing zone

812
00:42:42,426 --> 00:42:45,636
of the wearer, as ethylene
oxide is a carcinogen

813
00:42:45,636 --> 00:42:48,486
in chronic inhalation
ethylene oxide has been linked

814
00:42:48,486 --> 00:42:49,556
to neurologic dysfunction

815
00:42:49,556 --> 00:42:51,626
and may cause other harmful
effects to the wearer.

816
00:42:54,656 --> 00:42:56,956
>> Thank you for that.

817
00:42:57,226 --> 00:43:00,486
Going back to our patients.

818

00:43:00,486 --> 00:43:01,956

We have a question that asks,

819

00:43:01,956 --> 00:43:05,256

when can transmission based

precautions be discontinued?

820

00:43:05,256 --> 00:43:06,476

Do you have guidance for that?

821

00:43:07,696 --> 00:43:09,986

>> Hi, this is Lieutenant

Commander Appiah,

822

00:43:09,986 --> 00:43:13,416

and we do have guidance

posted on our website.

823

00:43:13,416 --> 00:43:17,276

So, the question then is

for hospitalized patients,

824

00:43:17,276 --> 00:43:20,386
when can transmission based
precautions be discontinued?

825
00:43:20,576 --> 00:43:25,346
I think that decision
is multifactorial,

826
00:43:25,346 --> 00:43:28,776
and it has to be made
on a case by case basis.

827
00:43:29,276 --> 00:43:30,716
Some of the criteria though

828
00:43:30,716 --> 00:43:34,746
for consideration should include
whether the patient's fever has

829
00:43:34,746 --> 00:43:38,186
resolved without use
of any antipyretics,

830
00:43:38,186 --> 00:43:39,996

whether they're having
improvement

831
00:43:39,996 --> 00:43:42,096
in their respiratory symptoms.

832
00:43:42,096 --> 00:43:44,556
And in particular, for
hospitalized patients,

833
00:43:44,776 --> 00:43:48,376
using a more conservative test
based approach should also

834
00:43:48,376 --> 00:43:49,336
be considered.

835
00:43:49,336 --> 00:43:51,336
And this is particularly --

836
00:43:51,336 --> 00:43:52,796
if we think about
patients who are going

837

00:43:52,796 --> 00:43:57,526

to have prolonged viral shedding

and may be contagious for longer

838

00:43:57,826 --> 00:44:00,586

than others, so these are

our hospitalized patients,

839

00:44:00,586 --> 00:44:04,006

including those who might be

severely immunocompromised,

840

00:44:04,006 --> 00:44:06,756

or -- or have close contact

with others who are going to be

841

00:44:06,756 --> 00:44:09,006

at high risk for severe disease.

842

00:44:09,006 --> 00:44:10,866

So, for these patients,

843

00:44:10,866 --> 00:44:14,846

a strategy that incorporates
testing might be preferred.

844
00:44:14,846 --> 00:44:17,276
And again, there's
guidance currently available

845
00:44:17,276 --> 00:44:20,046
on discontinuing
transmission based precautions

846
00:44:20,416 --> 00:44:21,706
on the CDC website.

847
00:44:23,866 --> 00:44:24,996
>> Thank you for that.

848
00:44:24,996 --> 00:44:27,616
A follow-up question
to what we were talking

849
00:44:27,616 --> 00:44:29,656
about earlier in
the Q&A session.

850

00:44:30,396 --> 00:44:34,846

If the resources are

available, do you recommend

851

00:44:34,846 --> 00:44:39,786

that patients are isolated in

a private room that have fever

852

00:44:39,786 --> 00:44:40,986

and respiratory symptoms,

853

00:44:41,196 --> 00:44:43,936

regardless of exposure

or travel history?

854

00:44:45,326 --> 00:44:46,866

>> This is Dr. David Kuhar.

855

00:44:47,196 --> 00:44:49,326

The short answer is, yes.

856

00:44:49,326 --> 00:44:52,866

Even at times
without pandemic, contact

857
00:44:52,866 --> 00:44:54,176
and droplet precautions,

858
00:44:54,176 --> 00:44:56,916
even including eye
protection recommended

859
00:44:56,916 --> 00:45:01,156
for managing patients with an
undiagnosed respiratory illness,

860
00:45:01,396 --> 00:45:04,396
if COVID-19 is on the
differential diagnosis,

861
00:45:04,496 --> 00:45:06,736
then isolation and adherence

862
00:45:06,786 --> 00:45:09,726
to the infection
control recommendations

863

00:45:09,726 --> 00:45:11,646

for COVID-19 is appropriate.

864

00:45:16,436 --> 00:45:17,676

>> Thank you very much.

865

00:45:17,676 --> 00:45:20,326

We have more questions coming

866

00:45:20,326 --> 00:45:23,296

in about personal

protective equipment.

867

00:45:23,296 --> 00:45:25,786

And our next question

asks about,

868

00:45:25,786 --> 00:45:28,906

is there things being done

to expand the use of PAPRs

869

00:45:28,906 --> 00:45:30,616

and elastomerics in hospitals?

870

00:45:30,826 --> 00:45:34,356

And are you aware of any

efforts by either the government

871

00:45:34,356 --> 00:45:36,316

or the manufacturers

that you reference

872

00:45:36,316 --> 00:45:40,406

to either expand

production or rely

873

00:45:40,546 --> 00:45:43,516

on other companies

or other suppliers?

874

00:45:43,516 --> 00:45:46,686

Can you please provide

some information on that?

875

00:45:46,686 --> 00:45:48,026

>> Sure. This is

Captain Delaney.

876

00:45:48,026 --> 00:45:51,246

NIOSH is in discussion with

respirator manufacturers and --

877

00:45:51,246 --> 00:45:53,906

and these manufacturers

are encouraging customers

878

00:45:53,966 --> 00:45:56,196

to use reusable devices,

879

00:45:56,606 --> 00:45:59,346

PAPRs and elastomerics

I mentioned earlier.

880

00:45:59,766 --> 00:46:00,946

In addition, NIOSH has been

881

00:46:00,946 --> 00:46:03,976

in discussion the Ford Motor

Company on their efforts

882

00:46:03,976 --> 00:46:05,946

to produce respirators,

and we're also working

883

00:46:05,946 --> 00:46:08,186

to provide information

on component parts

884

00:46:08,186 --> 00:46:12,476

and material shortages

manufacturers are experiencing.

885

00:46:12,476 --> 00:46:13,576

And this is a good opportunity

886

00:46:13,576 --> 00:46:16,536

to remind facilities using

these elastomeric respirators

887

00:46:16,536 --> 00:46:19,626

and PAPRs that they should

have up to date cleaning

888

00:46:19,626 --> 00:46:21,666
and disinfection
procedures in place

889
00:46:21,666 --> 00:46:24,526
because these are essential
part of use for protection

890
00:46:24,526 --> 00:46:25,906
against infectious agents.

891
00:46:28,976 --> 00:46:30,096
>> Thank you for that.

892
00:46:30,096 --> 00:46:33,406
Our next question asks, if we
have a patient in our facility

893
00:46:33,406 --> 00:46:36,506
with a known cause of illness,
whether it be influenza

894
00:46:36,506 --> 00:46:40,686
or something, should testing for

SARS-CoV-2 still be performed?

895

00:46:40,826 --> 00:46:48,276

>> So, there are sporadic

reports of patients

896

00:46:48,276 --> 00:46:51,466

with SARS-CoV-2, as

well as co-infection

897

00:46:51,466 --> 00:46:53,406

with other respiratory viruses.

898

00:46:53,976 --> 00:46:58,476

So, detection of another

respiratory virus, for example,

899

00:46:58,596 --> 00:47:02,006

doesn't exclude the

diagnosis of SARS-CoV-2

900

00:47:02,126 --> 00:47:03,256

if you have suspicions.

901

00:47:03,256 --> 00:47:06,396

So, clinicians should use

their judgment to determine

902

00:47:06,396 --> 00:47:08,776

if a patient has

signs or symptoms

903

00:47:08,776 --> 00:47:11,746

that could be compatible

with COVID-19

904

00:47:11,746 --> 00:47:14,056

and whether they

should be tested.

905

00:47:14,326 --> 00:47:17,666

And we continue to encourage

that clinician should also --

906

00:47:17,666 --> 00:47:20,926

for those you are investigating

for potential COVID-19 look

907

00:47:20,926 --> 00:47:23,796

for causes of other respiratory

illness, including influenza,

908

00:47:23,796 --> 00:47:25,676

particularly because

it's treatable.

909

00:47:28,326 --> 00:47:29,456

>> Thank you for that.

910

00:47:29,456 --> 00:47:32,686

And the following question

might have been answered during

911

00:47:32,686 --> 00:47:33,956

these presentations.

912

00:47:33,956 --> 00:47:36,856

However, I believe

it merits repeating

913

00:47:36,856 --> 00:47:40,076

and our inquirer might have

joined a little bit later.

914

00:47:40,076 --> 00:47:43,186

The question asks, do

patients with possible

915

00:47:43,186 --> 00:47:46,396

or confirmed COVID-19

need to be placed

916

00:47:46,396 --> 00:47:48,806

in airborne infection

isolation rooms?

917

00:47:50,266 --> 00:47:52,346

>> Hi, this is Dr. David Kuhar.

918

00:47:53,356 --> 00:47:54,816

No, they do not.

919

00:47:54,886 --> 00:47:58,376

They can just be placed in

a regular examination room

920

00:47:58,376 --> 00:48:00,776

or other patient room

with the door closed.

921

00:48:00,986 --> 00:48:05,446

Airborne infection isolation

room placement would only be

922

00:48:05,446 --> 00:48:08,216

recommended if --

for the performance

923

00:48:08,216 --> 00:48:10,976

of aerosol generating procedures

on a patient.

924

00:48:15,416 --> 00:48:16,246

>> Thank you.

925

00:48:16,246 --> 00:48:18,606

Follow-up question.

926

00:48:19,096 --> 00:48:20,466
Should PPE be used

927
00:48:20,466 --> 00:48:23,476
when performing a
nasal pharyngeal swab

928
00:48:23,736 --> 00:48:25,846
on a known or suspected case?

929
00:48:27,746 --> 00:48:29,976
>> This is Dr. David
Kuhar again.

930
00:48:30,116 --> 00:48:36,436
The -- the usual recommended
personal protective equipment

931
00:48:36,746 --> 00:48:40,216
respirator or facemask, if a
respirator is not available,

932
00:48:40,216 --> 00:48:43,076
eye protection, gown,

and gloves should be worn

933
00:48:43,076 --> 00:48:45,766
when performing a
nasopharyngeal swab on a known

934
00:48:45,766 --> 00:48:47,576
or suspected COVID-19 patient,

935
00:48:47,936 --> 00:48:49,866
and also note a nasopharyngeal
--

936
00:48:50,076 --> 00:48:52,956
performing a nasal stirring
nasopharyngeal swab does not

937
00:48:53,236 --> 00:48:54,206
need to be performed

938
00:48:54,206 --> 00:48:56,026
in an airborne infection
isolation room.

939

00:48:59,446 --> 00:49:00,396

>> Thank you, sir.

940

00:49:00,926 --> 00:49:06,236

A question about PPE's NIOSH

had been mentioned earlier.

941

00:49:06,236 --> 00:49:09,726

Our inquirer is curious, if

they cannot find NIOSH approve

942

00:49:09,726 --> 00:49:12,436

products, can they use

products from other countries

943

00:49:12,436 --> 00:49:14,976

that are certified to those

international standards?

944

00:49:16,286 --> 00:49:17,836

>> Hi, this is Captain Delaney.

945

00:49:17,836 --> 00:49:21,426

Yes. CDC posted a

table of standards

946

00:49:21,426 --> 00:49:22,946

and guidelines

947

00:49:23,256 --> 00:49:25,786

providing potential options

for products designed

948

00:49:25,786 --> 00:49:29,366

to standards similar to NIOSH

approved N95 respirators.

949

00:49:29,936 --> 00:49:34,136

Earlier today, the FDA also

issued their emergency use

950

00:49:34,136 --> 00:49:37,516

authorization for non-NIOSH

approved respirators approved

951

00:49:37,516 --> 00:49:38,546

in other countries.

952

00:49:38,686 --> 00:49:42,246

Standards and guidelines from

Australia, Brazil, Europe,

953

00:49:42,456 --> 00:49:45,356

Japan, Korea, and

Mexico are recognized.

954

00:49:45,716 --> 00:49:49,486

The China standards are not

on their list.

955

00:49:49,686 --> 00:49:51,186

In recent weeks, we

956

00:49:51,186 --> 00:49:52,516

have been receiving a lot

957

00:49:52,516 --> 00:49:55,206

of counterfeit products

coming from China.

958

00:49:55,786 --> 00:49:57,326
We're also receiving inquiries

959
00:49:57,326 --> 00:49:59,886
about respirators
previously approved by NIOSH

960
00:49:59,886 --> 00:50:02,756
that have been rescinded due to
quality issues that are back --

961
00:50:02,756 --> 00:50:04,176
these products are now being --

962
00:50:04,176 --> 00:50:05,436
appearing back in
the marketplace.

963
00:50:05,836 --> 00:50:09,126
So, consequently, we are
considering taking China off

964
00:50:09,126 --> 00:50:10,846
of our list of suggested options

965

00:50:10,846 --> 00:50:13,506

when supplies are low

given these concerns.

966

00:50:16,386 --> 00:50:17,686

>> Thank you very much.

967

00:50:17,686 --> 00:50:19,676

The following question

might have also been

968

00:50:19,676 --> 00:50:20,596

addressed earlier.

969

00:50:20,596 --> 00:50:24,276

But we have questions

about chloroquine

970

00:50:24,276 --> 00:50:25,536

and hydroxychloroquine.

971

00:50:25,536 --> 00:50:29,076

And can you speak to both

if these are recommended

972

00:50:29,076 --> 00:50:31,026

for treatment of COVID-19?

973

00:50:31,026 --> 00:50:33,796

And can you also address

any side effects associated

974

00:50:33,796 --> 00:50:34,196

with them?

975

00:50:36,266 --> 00:50:39,056

>> Yes. This is Lieutenant

Commander Appiah.

976

00:50:39,296 --> 00:50:43,316

So, hydroxychloroquine and

chloroquine, they are both drugs

977

00:50:43,316 --> 00:50:46,636

that are prescription

available, drugs that are used

978

00:50:46,636 --> 00:50:50,656

for treatment of malaria, and

then inflammatory conditions,

979

00:50:50,656 --> 00:50:53,626

like lupus and rheumatoid

arthritis.

980

00:50:53,626 --> 00:50:57,906

So, both drugs have in vitro

activity against SARS-CoV-2,

981

00:50:57,906 --> 00:51:00,396

as well as other corona viruses.

982

00:51:00,396 --> 00:51:02,906

And hydroxychloroquine

is thought

983

00:51:02,906 --> 00:51:05,916

to have higher potency

against SARS-CoV-2.

984

00:51:06,516 --> 00:51:08,456

That said, there's

no available data

985

00:51:08,456 --> 00:51:12,026

from randomized controlled

trials to inform guidance

986

00:51:12,026 --> 00:51:14,556

on using these drugs

for either prophylaxis

987

00:51:14,556 --> 00:51:16,826

or treatment of COVID-19.

988

00:51:16,826 --> 00:51:19,776

There are several clinical

trials planned, including some

989

00:51:19,776 --> 00:51:21,906

that are soon enrolling

in the U.S.

990

00:51:21,906 --> 00:51:24,716
to investigate using
hydroxychloroquine

991
00:51:24,716 --> 00:51:28,516
for prophylaxis or treatment
of SARS-CoV-2 infection.

992
00:51:28,516 --> 00:51:29,596
I'm sorry, what --
what was the --

993
00:51:30,136 --> 00:51:31,776
the second corollary question?

994
00:51:31,936 --> 00:51:33,966
>> No problem, I'm
happy to repeat it.

995
00:51:33,966 --> 00:51:36,546
The second question was
related to adverse events

996
00:51:36,546 --> 00:51:40,916

or side effects related

to hydroxychloroquine?

997

00:51:40,916 --> 00:51:44,746

>> Yes. So, both drugs do

you have known safety risks

998

00:51:44,746 --> 00:51:47,636

and the main concerns

are cardiotoxicity,

999

00:51:47,636 --> 00:51:52,036

prolonged QT syndrome with

prolonged use of these drugs,

1000

00:51:52,036 --> 00:51:55,176

particularly in patients with

hepatic or renal dysfunction

1001

00:51:55,176 --> 00:51:56,486

and immunosuppression.

1002

00:51:59,576 --> 00:52:01,366

>> Thank you for that.

1003

00:52:01,366 --> 00:52:04,956

Next question related

to cleaning agents.

1004

00:52:05,296 --> 00:52:08,306

Can you please provide any

guidance on how we can evaluate

1005

00:52:08,306 --> 00:52:10,976

if our cleaning agent will

work against the virus?

1006

00:52:14,596 --> 00:52:18,326

>> Yeah. This is

Dr. David Kuhar.

1007

00:52:18,326 --> 00:52:22,506

The EPA lists end agents

meet EPA criteria for use

1008

00:52:22,506 --> 00:52:26,996

against SARS-CoV-2 and this

list is on the EPA website

1009

00:52:26,996 --> 00:52:27,976

and it's updated, as needed.

1010

00:52:32,166 --> 00:52:32,566

>> Thank you.

1011

00:52:32,566 --> 00:52:37,016

Next question also has to

do with similar topics.

1012

00:52:37,016 --> 00:52:39,476

What kind of personal protective

equipment do you recommend

1013

00:52:39,476 --> 00:52:41,756

for environmental workers

when they're cleaning rooms

1014

00:52:41,756 --> 00:52:44,006

of hospitalized COVID-19

patients?

1015

00:52:46,976 --> 00:52:49,856

>> Yes. This is a Dr.

David Kuhar again.

1016

00:52:50,416 --> 00:52:52,786

It depends on the situation.

1017

00:52:53,306 --> 00:52:57,766

So, if cleaning is performed

with a COVID-19 patient

1018

00:52:57,826 --> 00:52:59,266

in the room, then all

1019

00:52:59,266 --> 00:53:01,686

of the recommended personal

protective equipment should be

1020

00:53:01,686 --> 00:53:04,226

worn, a respirator or facemask.

1021

00:53:04,876 --> 00:53:06,836

If a respirator is

not available,

1022

00:53:06,836 --> 00:53:08,426

eye protection, gown,

and gloves.

1023

00:53:08,726 --> 00:53:11,116

If the room is being

terminally cleaned

1024

00:53:11,316 --> 00:53:14,656

after the patient has left

and enough time has elapsed

1025

00:53:14,656 --> 00:53:16,956

that appropriate air

exchanges have occurred

1026

00:53:16,956 --> 00:53:20,306

to remove potentially infectious

particles, then a gown

1027

00:53:20,306 --> 00:53:21,486

and gloves could be worn.

1028

00:53:21,676 --> 00:53:25,316

And it's important to

note that for environment

1029

00:53:25,586 --> 00:53:27,486

environmental services

personnel,

1030

00:53:27,746 --> 00:53:31,486

personal protective

equipment is not just needed

1031

00:53:31,486 --> 00:53:33,876

for potential pathogen

exposure prevention,

1032

00:53:33,876 --> 00:53:35,996

but also potentially

for chemical ones.

1033

00:53:36,166 --> 00:53:38,616

And so, the used personal

protective equipment also needs

1034

00:53:38,616 --> 00:53:40,416

to be appropriate for

the products used.

1035

00:53:43,126 --> 00:53:44,406

>> Thank you for that answer.

1036

00:53:45,506 --> 00:53:49,816

If -- if we are aware of

nontraditional respirators

1037

00:53:49,816 --> 00:53:53,916

and people kind of

designing their nontraditional

1038

00:53:53,916 --> 00:53:57,316

respirators, is there a way

I can get information on how

1039

00:53:57,316 --> 00:53:59,066

to make one that

would be appropriate

1040

00:53:59,066 --> 00:53:59,946
for healthcare settings?

1041
00:54:10,446 --> 00:54:11,376
>> I'm sorry.

1042
00:54:11,376 --> 00:54:12,856
Could you repeat the
question, please?

1043
00:54:13,026 --> 00:54:14,266
>> Yes. I'm happy to repeat it.

1044
00:54:14,266 --> 00:54:16,586
So, this question comes
in as follows, I --

1045
00:54:16,586 --> 00:54:18,476
I summarize it a little.

1046
00:54:18,476 --> 00:54:20,606
If-- if the inquirer is aware

1047

00:54:20,606 --> 00:54:24,356
of individuals designing
nontraditional respirators,

1048
00:54:25,166 --> 00:54:27,856
can they get information
on how to make one

1049
00:54:27,856 --> 00:54:30,726
that would be appropriate to
be worn in healthcare settings?

1050
00:54:32,846 --> 00:54:34,786
>> Yeah. Hi, this is --
this is Captain Delaney.

1051
00:54:35,256 --> 00:54:37,736
As I mentioned earlier,
CDC's National Institute

1052
00:54:37,736 --> 00:54:40,206
for Occupational Safety
and Health is the --

1053

00:54:40,206 --> 00:54:43,046
the U.S. agency that certifies
and approves respirators

1054
00:54:43,356 --> 00:54:45,326
through a testing
process where we ensure

1055
00:54:45,326 --> 00:54:48,726
that the respirator needs
certain performance standards,

1056
00:54:48,726 --> 00:54:50,216
including filter efficiency.

1057
00:54:50,486 --> 00:54:53,336
If you are working on a
design and think you wish

1058
00:54:53,336 --> 00:54:55,106
to obtain a NIOSH
approval for that,

1059
00:54:55,676 --> 00:54:58,516

we suggest that you investigate
our approval requirements,

1060
00:54:58,516 --> 00:55:00,376
which can be found online.

1061
00:55:00,816 --> 00:55:02,186
Designers and manufacturers

1062
00:55:02,186 --> 00:55:04,626
of respirators seeking the
NIOSH approval must prove

1063
00:55:04,626 --> 00:55:06,476
that their device meets
NIOSH requirements

1064
00:55:06,476 --> 00:55:10,596
by submitting pretest data,
either performed by

1065
00:55:10,596 --> 00:55:14,506
the designer or manufacturer,
themselves, or through the use

1066

00:55:14,506 --> 00:55:16,206

of a third party laboratory.

1067

00:55:16,686 --> 00:55:18,466

And those respirator

1068

00:55:18,556 --> 00:55:22,876

performance requirements are

contained in 42CFR 84 and all

1069

00:55:22,876 --> 00:55:24,836

that information is

on our NIOSH website.

1070

00:55:27,636 --> 00:55:29,386

>> Thank you so much

for sharing that.

1071

00:55:29,386 --> 00:55:34,556

As hospitals start

seeing an increase in patients

1072

00:55:34,556 --> 00:55:37,716
and space becomes more limited,
our next inquirer is asking,

1073
00:55:38,396 --> 00:55:41,546
what is your recommendations,
is it acceptable for patients

1074
00:55:41,546 --> 00:55:43,706
with COVID-19 to share rooms?

1075
00:55:45,296 --> 00:55:47,516
>> Hi, this is Dr. David Kuhar.

1076
00:55:47,796 --> 00:55:53,586
For patients with confirmed
COVID-19 sharing a room

1077
00:55:53,586 --> 00:55:55,656
or patient cohorting
is acceptable.

1078
00:55:55,656 --> 00:56:00,886
For those with

suspected disease,

1079
00:56:00,886 --> 00:56:04,646
they could actually have another
disease process, so cohorting

1080
00:56:04,646 --> 00:56:07,276
of suspecting cases is
not ideal.

1081
00:56:10,806 --> 00:56:12,666
>> Thank you so much for
sharing that distinction.

1082
00:56:12,666 --> 00:56:17,986
And it appears we have
time for one last question.

1083
00:56:17,986 --> 00:56:21,326
Our audience member asks,

1084
00:56:21,326 --> 00:56:24,246
do existing commercially
available respiratory virus

1085

00:56:24,246 --> 00:56:26,676

panels detect SARS-CoV-2?

1086

00:56:29,076 --> 00:56:30,896

>> This is Lieutenant

Commander Appiah.

1087

00:56:30,896 --> 00:56:32,426

So, currently, no.

1088

00:56:32,946 --> 00:56:37,126

These panels, they can detect a

number of respiratory viruses,

1089

00:56:37,126 --> 00:56:39,526

including other human

coronaviruses,

1090

00:56:39,526 --> 00:56:40,986

but not SARS-CoV-2.

1091

00:56:40,986 --> 00:56:44,116

But hopefully, in the
future, it's expected

1092
00:56:44,116 --> 00:56:45,616
that they will have ability

1093
00:56:45,616 --> 00:56:48,896
to detect SARS-CoV-2
in these specimens.

1094
00:56:50,816 --> 00:56:52,596
>> Thank you so much
for that answer.

1095
00:56:52,906 --> 00:56:56,326
And this concludes our Q&A
session and on behalf of COCA,

1096
00:56:56,326 --> 00:56:59,056
I would like to thank
everyone for joining us today

1097
00:56:59,056 --> 00:57:02,316
with the special thank you to

our presenters, Dr. Messonioer,

1098

00:57:02,556 --> 00:57:04,886

Lieutenant Commander

Appiah, Dr. Bell,

1099

00:57:04,996 --> 00:57:06,826

Dr. Kuhar, and Captain Delaney.

1100

00:57:10,076 --> 00:57:13,416

The video recording will be

posted on COCA's web page

1101

00:57:13,416 --> 00:57:20,086

at emergency.cdc.gov/coca a

few hours after the call ends.

1102

00:57:20,086 --> 00:57:25,966

Again, that web address

is emergency.cdc.gov/coca.

1103

00:57:25,966 --> 00:57:30,526

Please continue to visit

emergency.cdc.gov/coca

1104

00:57:30,526 --> 00:57:33,366

over the next several days as

we intend to host COCA calls

1105

00:57:33,366 --> 00:57:35,676

to keep you informed

of the latest guidance

1106

00:57:35,676 --> 00:57:38,186

and updates on COVID-19.

1107

00:57:38,186 --> 00:57:40,446

In addition to our webpage,

COCA call announcements

1108

00:57:40,446 --> 00:57:43,556

for upcoming COCA calls

will also be sent via email,

1109

00:57:43,556 --> 00:57:46,666

so please subscribe

to COCA at cdc.gov

1110

00:57:46,736 --> 00:57:48,586

to receive these notifications.

1111

00:57:49,066 --> 00:57:51,966

Please share the invitations

with your clinical colleagues.

1112

00:57:51,966 --> 00:57:54,436

As stated earlier, we intend

1113

00:57:54,436 --> 00:57:58,426

to hold a COCA call this coming

Friday at 2 p.m. Eastern Time.

1114

00:57:58,806 --> 00:58:02,196

Additional information will be

shared via call announcements

1115

00:58:02,196 --> 00:58:05,076

and should be posted

shortly on the COCA webpage

1116

00:58:05,116 --> 00:58:10,716

at emergency.cdc.gov/coca.

1117

00:58:10,826 --> 00:58:15,526

I also want to put in a plug

for the clinical call cen ter

1118

00:58:15,526 --> 00:58:17,856

than Lieutenant Commander

Appiah had mentioned.

1119

00:58:17,856 --> 00:58:21,776

Again, that information is the

CDC's COVID-19 clinical call

1120

00:58:21,776 --> 00:58:28,746

center is available 24

hours a day at 770-488-7100.

1121

00:58:28,746 --> 00:58:35,776

The number is 770-488-7100

for anyone that missed it

1122

00:58:35,776 --> 00:58:36,786

at the top of the call.

1123

00:58:37,106 --> 00:58:40,716

To receive information

on upcoming COCA calls

1124

00:58:40,716 --> 00:58:42,586

or other COCA products

and services,

1125

00:58:42,586 --> 00:58:45,576

join the COCA mailing list

by visiting the COCA web page

1126

00:58:45,576 --> 00:58:50,046

at emergency.cdc.gov/coca

and click

1127

00:58:50,046 --> 00:58:52,346

on join the COCA

mailing list link.

1128

00:58:52,586 --> 00:58:55,886

To stay connected to the latest

news from COCA, be sure to like

1129

00:58:55,886 --> 00:58:57,196

and follow us on Facebook

1130

00:58:57,196 --> 00:59:01,076

at facebook.com/cdc

clinician outreach

1131

00:59:01,076 --> 00:59:02,396

and communication activity.

1132

00:59:02,496 --> 00:59:04,206

Again, thank you for joining us

1133

00:59:04,206 --> 00:59:05,976

for today's call and

have a great day.